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EXAMINER	
KHAJURIA, SHRIPAL K	
ART UNIT	PAPER NUMBER
2478	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/534,839	SEO ET AL.	
	Examiner	Art Unit	
	SHRIPAL K. KHAJURIA	2478	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21 and 40-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21 and 40-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 May 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-21 and 40-47 are pending in this Office Action.

Response to Arguments

Applicants arguments filed 12/2/10 have been fully considered but they are not persuasive. The reasons set forth below.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 7-8, 10-15, 17-18, 20-21 and 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al. (US 2001/0021176) in view of Rönneke (US 6515989) and in further view of Liberti et al US (6,947,408).

Regarding claim 1, (Currently amended) Mimura teaches an analyzer for packet data traffic transmitted between a subscriber and a service server (Mimura, figure 1, [0035] "a packet switch that implements monitoring communication flows and collecting statistics data"), comprising:

a packet data separator, wherein the packet data separator is configured to:

separate user packet data transmitted between: one of the a mobile communication exchange or the packet controller, and the service server, and

receive the user packet data (Mimura, figure 1 "input interface 2" and "flow identifying unit 3", [0036] "IP packets...are input to the input IF 2" and [0037] "unit 3 receives...and identifies...by using information contained in the head of the packets");

a traffic analyzer for separating the user packet data received through the packet data separator according to transmission directions, and analyzing the user packet data (Mimura, figure 1 "flow identifying unit 3" and "flow table 4", [0037] "The flow identifying unit 3...such as Source IP Address (SIP), Destination IP Address (DIP)" and "a search key comprising any information items can be applied if available for communication flow identification" it is understood that the directions can be identified by using the information about source and destination of the packet);

a statistics storage unit for storing and managing result data analyzed by the traffic analyzer (Mimura, figure 1 "meter 5", [0038] "meter 5 measures predetermined items...and retains these measurements as statistics data"); and

a statistics reference unit for retrieving various data stored in the statistics storage unit, and providing statistical information desired by the subscriber (Mimura, figure 1 "management IF 13", figure 3 "meter reader 39", [0042] "delivers the statistics data...sends this data to the network management system").

Mimura does not explicitly teach of using of a wireless data service through a mobile communication network and therefore does not disclose the registration of subscriber's device to use such service.

Rönneke discloses a mobile communication network with architecture that inter-works with existing packet data networks and provides data services to subscriber's mobile station (Rönneke, figure 1, column 2 lines 44-56).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine Mimura's IP data packet monitoring with Rönneke's disclosure of mobile communication network with data services in order to provide means for gathering information useful for network management and financial or billing management (Mimura, [0005] "quality of communication" and [0009] "charging and other administrative tasks") for packet data services part of the mobile communication network (Rönneke, column 1 lines 65-67, column 2 lines 1-5).

Although Mimura and Ronneke teach the limitations above, they fail to explicitly teach receiving the user data packet only after RP registration is provided as further recited in the claim. Conversely Liberti et al teaches such a limitation; receive the user packet data only after RP registration is provided (see column 4 lines 49-63). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined the teachings of Mimura and Ronneke with the sending of data only after an RP registration is provided as taught by Liberti et al. The motivation for this would have been to ensure the RP is the strongest signal (see column 4 lines 19-24).

Regarding claim 12, (Currently amended) Mimura teaches a device for monitoring a service for a subscriber through an analysis of packet data traffic transmitted between the subscriber and a service server (Mimura, figure 1) comprising:

a packet data separator that facilitates providing a service to the subscriber by the service server, wherein the packet data separator is configured to: separate user packet data transmitted, and receive the user packet data (Mimura, figure 1 "input interface 2" and "flow identifying unit 3", [0036] "IP packets...are input to the input IF 2" and [0037] "unit 3 receives...and identifies...by using information contained in the head of the packets");

a traffic analyzer for separating the user packet data received through the packet data separator according to transmission directions, and analyzing the user packet data (Mimura, figure 1 "flow identifying unit 3" and "flow table 4", [0037] "The flow identifying unit 3...such as Source IP Address (SIP), Destination IP Address (DIP)" and "a search key comprising any information items can be applied if available for communication flow identification" it is understood that the directions can be identified by using the information about source and destination of the packet);

a statistics storage unit for storing and managing result data analyzed by the traffic analyzer (Mimura, figure 1 "meter 5", [0038] "meter 5 measures predetermined items...and retains these measurements as statistics data"); and

a service monitoring unit for generating information including normality states on the subscriber for each service through various data stored in the statistics storage unit, and providing the information to a manager (Mimura, figure 3 "meter reader 39" and "manager 38", [0005] "quality of communication" and [0009] "charging and other administrative tasks").

Mimura does not explicitly teach of using of a wireless data service through a mobile communication network and therefore does not disclose the registration of subscriber's device to use such service.

Rönneke discloses a mobile communication network with architecture that inter-works with existing packet data networks and provides data services to subscriber's mobile station (Rönneke, figure 1, column 2 lines 44-56).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine Mimura's IP data packet monitoring with Rönneke's disclosure of mobile communication network with data services in order to provide means for gathering information useful for network management and financial or billing management (Mimura, [0005] "quality of communication" and [0009] "chagrining an other administrative tasks") for packet data services part of the mobile communication network (Rönneke, column 1 lines 65-67, column 2 lines 1-5).

Although Mimura and Ronneke teach the limitations above, they fail to explicitly teach receiving the user data packet only after RP registration is provided as further recited in the claim. Conversely Liberti et al teaches such a limitation; receive the user packet data only after RP registration is provided (see column 4 lines 49-63). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined the teachings of Mimura and Ronneke with the sending of data only after an RP registration is provided as taught by Liberti et al. The motivation for this would have been to ensure the RP is the strongest signal (see column 4 lines 19-24).

Regarding claims 2 and 13, (Currently amended) Mimura in view of Rönneke in view of Liberti et al discloses the analyzer of claim 1 and the device of claim 12, wherein the packet data separator has Ethernet access with the service server and with the mobile communication exchange or the packet controller (Rönneke, column 4 lines 27-31 and 54-62), and

separates the user packet data into transmit data and receive data (Mimura, figure 1 "input interface 2" and "flow identifying unit 3", [0036] "IP packets...are input to the input IF 2" and [0037] "The flow identifying unit 3...such as Source IP Address (SIP), Destination IP Address (DIP)" and "a search key comprising any information items can be applied if available for communication flow identification" it is understood that the directions can be identified by using the information about source and destination of the packet and rejection regarding claim 1 above).

Regarding claims 3 and 14, (Currently amended) Mimura in view of Rönneke in view of Liberti et al discloses the analyzer of claim 1 and the device of claim 12, wherein the traffic analyzer separates the user packet data received through the packet data separator into transmit data and receive data, and analyzes the transmit data and the receive data (Mimura, figure 1 "flow identifying unit 3" and "flow table 4", [0037] "The flow identifying unit 3...such as Source IP Address (SIP), Destination IP Address (DIP)" and "a search key comprising any information items can be applied if available for communication flow identification" it is understood that the directions can be identified by using the information about source and destination of the packet).

Regarding claims 4 and 15, (Currently amended) Mimura in view of Rönneke in view of Liberti et al discloses the analyzer of claim 3 and the device of claim 12, wherein the traffic analyzer analyzes a TCP (transmission control protocol) transmission flow between the service server and the mobile communication exchange or the packet controller through the user packet data (Mimura, [0037] "...TCP layers which are upper than the IP layer maybe used" and rejection on claim 1 cited above).

Regarding claims 7 and 17, (Currently amended) Mimura in view of Rönneke in view of Liberti et al discloses the analyzer of claim 1 and the device of claim 12, wherein a switching hub for transmitting packets to an appropriate port based on a packet address, and a router for connecting separated networks that use the same transmission protocol, are connected between the packet data separator and the service server (Mimura, figure 3 "34"-"36").

Regarding claim 8, (Currently amended) Mimura discloses a method for analyzing packet data traffic transmitted between a subscriber and a service server (Mimura, [0035] "monitoring communication flows and collecting statistics data") comprising:

(a) receiving and separating user packet data transmitted (Mimura, [0037] "using the information contained in the header", "receives the IP packets delivered");

(b) separating the user packet data received in (a) according to transmission directions, and analyzing the user packet data (Mimura, [0037] "flow identifying...identifies a flow...conditions for communication flow identification stored in the flow table 4 are set by using...Source IP Address (SIP), Destination IP Address

(DIP)", it is understood that the directions can be identified by using the information about source and destination of the packet); and

(c) providing statistical information desired by the subscriber by using result data analyzed in (b) (Mimura, [0037] "...collecting statistics data obtained by monitoring the communication flow").

Mimura does not explicitly disclose using a wireless data service through a mobile communication network and does not disclose registering of subscriber's device before using such service.

Rönneke discloses a mobile communication network with architecture that inter-works with existing packet data networks and provides data services to subscriber's mobile station (Rönneke, figure 1, column 2 lines 44-56).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine Mimura's IP data packet monitoring with Rönneke's disclosure of mobile communication network with data services in order to provide means for gathering information useful for network management and financial or billing management (Mimura, [0005] "quality of communication" and [0009] "chagrining an other administrative tasks") for packet data services part of the mobile communication network (Rönneke, column 1 lines 65-67, column 2 lines 1-5).

Although Mimura and Ronneke teach the limitations above, they fail to explicitly teach receiving the user data packet only after RP registration is provided as further recited in the claim. Conversely Liberti et al teaches such a limitation; receive the user packet data only after RP registration is provided (see column 4 lines 49-63). Therefore

it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined the teachings of Mimura and Ronneke with the sending of data only after an RP registration is provided as taught by Liberti et al. The motivation for this would have been to ensure the RP is the strongest signal (see column 4 lines 19-24).

Regarding claim 18, (Currently amended) Mimura teaches a method for monitoring a service for a subscriber through an analysis of packet data traffic transmitted between the subscriber and a service server (Mimura, [0035] "monitoring communication flows and collecting statistics data") comprising:

(a) receiving and separating user packet data transmitted (Mimura, [0037] "using the information contained in the header", "receives the IP packets delivered");

(b) separating the user packet data received in (a) according to transmission directions, and analyzing the user packet data (Mimura, [0037] "flow identifying…identifies a flow…conditions for communication flow identification stored in the flow table 4 are set by using…Source IP Address (SIP), Destination IP Address (DIP)", it is understood that the directions can be identified by using the information about source and destination of the packet); and

(c) generating information including normality states on the subscriber for each service through result data analyzed in (b), and providing the information to a manager (Mimura, figure 3 "meter reader 39" and "manager 38", [0040] and [0044]).

Mimura may have failed to disclose a mobile communication network and wireless data service provide through the mobile network between mobile communication exchange and the service server.

Rönneke discloses a mobile communication network with architecture that inter-works with existing packet data networks and provides data services to subscriber's mobile station (Rönneke, figure 1 "BTS 22", "BSC 20", "SGSN 18", "GGSN 24", "MSC/VLR 14" and "HLR 16", column 2 lines 44-56).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine Mimura's IP data packet monitoring with Rönneke's disclosure of mobile communication network with data services in order to provide means for gathering information useful for network management and financial or billing management (Mimura, [0005] "quality of communication" and [0009] "chagrining an other administrative tasks") for packet data services part of the mobile communication network (Rönneke, column 1 lines 65-67, column 2 lines 1-5).

Although Mimura and Ronneke teach the limitations above, they fail to explicitly teach receiving the user data packet only after RP registration is provided as further recited in the claim. Conversely Liberti et al teaches such a limitation; receive the user packet data only after RP registration is provided (see column 4 lines 49-63). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined the teachings of Mimura and Ronneke with the sending of data only after an RP registration is provided as taught by Liberti et al. The

motivation for this would have been to ensure the RP is the strongest signal (see column 4 lines 19-24).

Regarding claims 9 and 19, (Currently amended) Mimura in view of Rönneke in view of Liberti et al discloses the method of claims 8 and 18, wherein (a) comprises:

separating the user packet data into transmit data and receive data (Mimura, figure 1 "input interface 2" and "flow identifying unit 3", [0036] "IP packets...are input to the input IF 2" and [0037] "The flow identifying unit 3...such as Source IP Address (SIP), Destination IP Address (DIP)" and "a search key comprising any information items can be applied if available for communication flow identification" it is understood that the directions can be identified by using the information about source and destination of the packet and rejection regarding claim 1 above), and

receiving the user packet data via Ethernet access between the service server and the mobile communication exchange or the packet controller (Rönneke, column 4 lines 27-31 and 54-62, figures 1 and 2).

Regarding claims 10 and 20, (Currently amended) Mimura in view of Rönneke in view of Liberti et al discloses the method of claims 8 and 18, wherein (b) comprises:

separating the received user packet data into transmit data and receive data, and analyzing the transmit data and the receive data (Mimura, [0037] "flow identifying…identifies a flow…conditions for communication flow identification stored in the flow table 4 are set by using…Source IP Address (SIP), Destination IP Address

(DIP)", it is understood that the directions can be identified by using the information about source and destination of the packet).

Regarding claims 11 and 21, (Currently amended) Mimura in view of Rönneke in view of Liberti et al discloses the method of claims 10 and 20, wherein a TCP transmission flow between the service server and the mobile communication exchange or the packet controller is analyzed through the user packet data (Mimura, [0037] "...TCP layers which are upper than the IP layer maybe used" and see rejection on claim 8 cited above).

Regarding claims 44, 45, 46 and 47, (New) Mimura in view of Ronneke in view of Liberti et al further teaches wherein the packet data separator is further configured to separate user packet data based upon at least two layers of the user packet data (see paragraph [0038] in Mimura).

3. Claims 5-6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al. (US 2001/0021176) in view of Rönneke (US 6515989) in view of Liberti et al US (6,947,408) as applied to claims 1 and 12 above, and further in view of Pruthi et al. (US 2002/0105911).

Regarding claim 5, (Currently amended) Mimura in view of Rönneke in view of Liberti et al discloses the analyzer of claim 1, wherein the statistics reference unit provides various real-time statistics data analyzed by the traffic analyzer to the

subscriber (Mimura, [0040] "meter 5 provides the function of observing incoming IP packets and acquiring statistics data").

Mimura in view of Rönneke may have failed to disclose that the statistics data are shown through a GUI (graphical user interface).

Pruthi discloses a GUI used to display statistics to users of its Network Monitor (Pruthi, figures 10-28).

It would have been obvious to the person of ordinary skill in the art, at the time the invention was made, to have used GUI as taught by Pruthi in Mimura's management system in order to inform the users who monitor the network of information useful to them.

Regarding claim 6, (Currently amended) Mimura in view of Rönneke in view of Liberti et al in view of Pruthi discloses the analyzer of claim 5, wherein the various real-time statistics data include statistics on communication amounts of receive data, transmit data, and receive and transmit data, access trials for each layer, a number of success times, a number of failure times, and current states, and further include usage statistics for each IP on each application, successful access rate statistics for each service, statistics on response times, and successful rate statistics on a PPP session for each base station (Mimura, [0040] and [0041], and Pruthi, [0033]).

Regarding claim 16, (Original) Mimura in view of Rönneke in view of Liberti et al discloses the device of claim 12. Mimura further discloses statistical information to be measured including several examples of items and suggests that items to be measured

are chosen to be items relevant to service provider's contract with user (Mimura, [0040] and [0041]).

Pruthi suggests statistical data to be measured for quality and quantity of service analysis and for billing based on such analysis (Pruthi, figure 4, [0033]).

Therefore, it would have been obvious to the person having ordinary skills in the art, at the time the invention was made, to have combined examples of statistical information as taught by Mimura and Pruthi together in order to gather all information relevant to the contract between service provider and user (Mimura, [0040]).

Remarks

The Applicant Argues:

The Mimura-Ronneke-Liberti combination fails to suggest each recitation of Applicants independent claims. Liberti fails to show or suggest Applicants claimed 'RP registration" and "packet data separator configured to...receive the user packet data only after and RP registration is provided".

In Response, the examiner respectfully submits:

The rejection is maintained because the combination of Mimura-Ronneke-Liberti does in fact render the limitations as obvious. First the applicant argues that the "RP" in there claims is not the same "RP" being mapped to in Liberti. The Examiner notes that the Applicant has not defined what "RP" is in their claim language. Taking

"RP" at its broadest reasonable interpretation one with ordinary skill in the art could easily map "RP" to be a radio port as taught in Liberti. None of the Applicants claims mention "Radio-PDSN" anywhere. The Examiner strongly recommends incorporating this into the claim language as to clarify what exactly and "RP' is in regards to the claims to further prosecution.

Next the Applicant argues Liberti does not teach "packet data separator configured to...receive the user packet data only after and RP registration is provided". There is no specific reasons given as to how or why Liberti fails to teach this limitation. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

The Applicant Argues:

The Mimura-Ronneke reference cannot be combined as proposed by the Examiner.

In Response, the examiner respectfully submits:

In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one

of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, the motivation to combine the Mimura reference with the Ronneke reference can be found within Ronneke in order to provide means for gathering information useful for network management and financial or billing management for packet data services part of the mobile communication network (Rönneke, column 1 lines 65-67, column 2 lines 1-5).

Mimura and Ronneke are inventions from analogous art. Mimura teaches "A packet switch identifies a communication flow carried across an IP network, observes the communication flow, and acquires statistics data thereof, such as the number of packets that passed through the switch, the number of discarded packets, time at which the packets arrived at the switch, and time at which the packets were sent out from the switch" (see abstract). Ronneke teaches clearly in Fig. 1 the use of an IP network along with mobile network. These two references are in fact related and can be combined to make an obviousness rejection. The Applicant has argued that these two references teach away from one another. However the combination requires the primary art to be modified and taking elements of Ronneke to modify Mimura one with ordinary skill in the art could arrive at the Applicants claim limitations. The modified Mimura reference would not be rendered useless when taking the elements mapped above from Ronneke to modify accordingly. Therefore the rejection and combination is maintained.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHRIPAL K. KHAJURIA whose telephone number is (571)270-5662. The examiner can normally be reached on Monday - Thursday Alt. Friday, 7:30AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Pwu can be reached on (571)272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. K. K./
Examiner, Art Unit 2478

/Kenny S Lin/
Primary Examiner, Art Unit 2478